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VOL. 25 NO. 7 February 14, 1975

Cooperative Economic Insect Report

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PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
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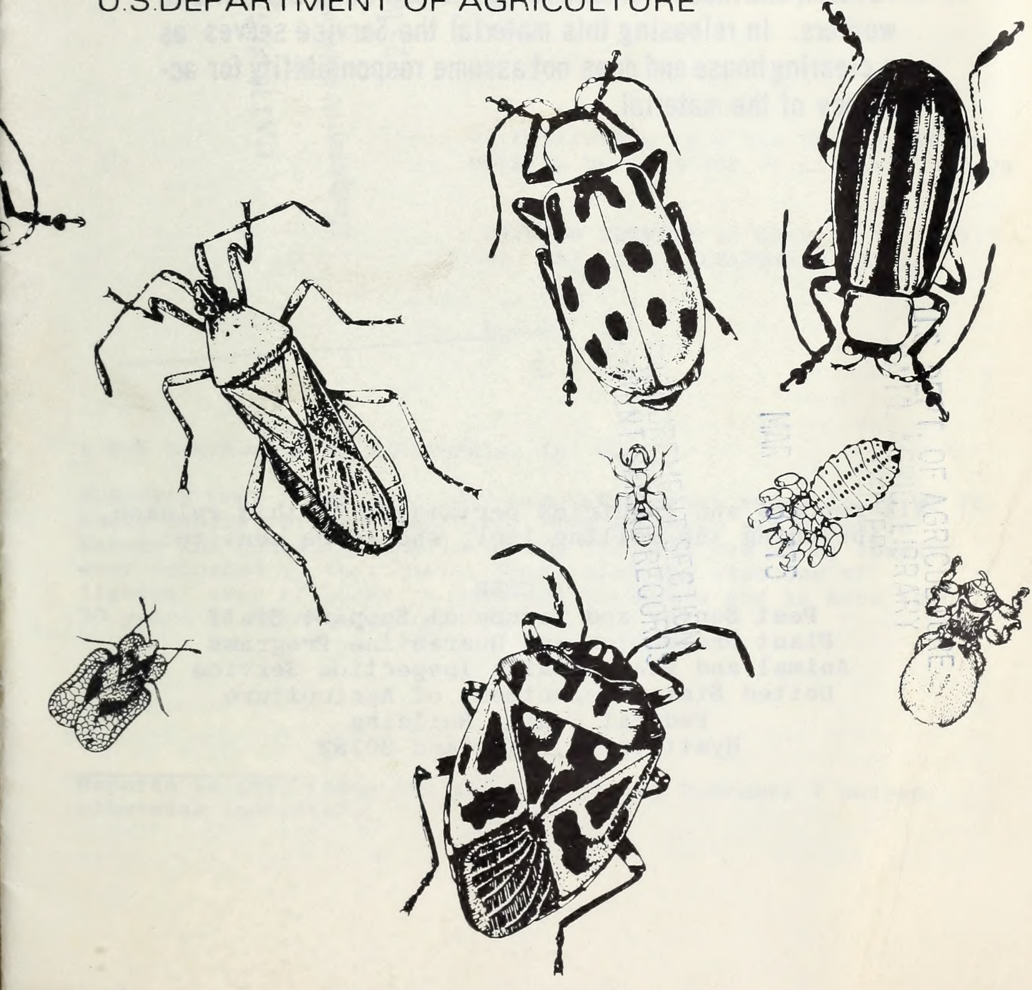

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
PEST SURVEY AND TECHNICAL SUPPORT STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Pest Survey and Technical Support Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
United States Department of Agriculture
Federal Center Building
Hyattsville, Maryland 20782

Volume 25 February 14, 1975 Number 7

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG moderate to heavy on small grains in north-central Texas. Parasitic wasps and predators active in some fields. (p. 63).

CABBAGE LOOPER and GREEN PEACH APHID damaged commercial spinach in southern Texas. (p. 64).

Potential for SOUTHERN PINE BEETLE spring and summer activity high in North Carolina. (p. 64).

EAR TICK moderate to heavy on livestock in Trans-Pecos area of Texas. (p. 65).

Detection

● A LEAFHOPPER reported in California is a new United States record, and has been shown to be a vector of citrus stubborn disease. (p. 66).

New State records include a DRYWOOD TERMITE in Georgia (p. 65), an ENCYRTID WASP in Florida (p. 65), and a LEAFMINER FLY in Virginia (p. 63).

For new county records see page 67.

Special Reports

A New Leafhopper in California. (p. 66).

EUROPEAN CORN BORER fall 1974 populations decreased in 10 of 12 North Central States reporting. Some increase was noted in Kansas and Nebraska. Population in Illinois was among lowest ever recorded in that State. Population was also one of lightest ever recorded in Iowa and Minnesota and in more than 30 years in Wisconsin. (pp. 69-76).

Reports in this issue are for week ending February 7 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING FEBRUARY 10

Reprinted from Weekly Weather and Crop Bulletin supplied by National Weather Service, NOAA.

HIGHLIGHTS: A series of Pacific storm fronts brought wet weather to the Far West last week. The coast of Washington, southern Oregon, a widespread area in northern California, and the southern California Pocket were all soaked with more than 2 inches of rain. Lesser amounts fell over most of California. Chilly polar air gripped most of the Nation from the central Rockies eastward pushing temperatures well below normal during the week. Only some isolated areas around the Nation's perimeter escaped the invasion of bitter cold air.

PRECIPITATION: Three polar storm systems produced some precipitation across most of the Nation last week before moving off the Atlantic coast. Meanwhile, a stationary front lingered along the gulf coast causing precipitation throughout the Southeastern States. Monday, a Low pressure system centered off the Pacific Northwest coast triggered rain and snow across the Pacific Coast States and the Great Basin. Elsewhere, heavy rains soaked the southern half of the Plains through the south Atlantic coast. Rain fell on the heels of a High pressure system extending from Upper New York southwestward to Louisiana on Tuesday. Rain also fell from Texas eastward to the Atlantic and northward into Kansas. Wednesday, a slow moving storm dumped snow from the northern and central Rockies east through the central Plains, upper Midwest, northern Plains, and upper Great Lakes. Rain, fog, and drizzle occurred in the Ohio Valley. Snow, which had been falling in the northeast quarter of the Nation since Tuesday, gradually diminished on Thursday. Only light snow lingered into the evening from the upper Great Lakes and eastern Ohio Valley to the Appalachians. Elsewhere a cold front invaded the Pacific Northwest causing rain on the coast and snow inland. Friday, the cold front in western Oregon and northwest California brought rain to the upper half of the Pacific Coast States changing to snow as it moved over the mountains into the northern Rockies. A new surge of arctic air brought snow to portions of North Dakota, Montana, Idaho, and Wyoming. Weather of the week continued on page 68.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Nymphs emerged in most previously surveyed areas of the Imperial Valley in Imperial County. Populations ranged 15-107 nymphs and adults in area with highest potential for control measures. First and second-instar nymphs dominated. Vegetation showed no signs of distress or drying. Survey to continue. Lack of rain in San Joaquin Valley in Fresno County greatly reduced amount of favorable vegetation within breeding grounds. In some areas, overwintering females retreating from favored slopes back to flats and canyon floors in search of vegetation for survival. Except for some canyons, there is lack of any treatable concentrations and light populations widely scattered on flats, slopes, and canyon floors. Unless some drastic environmental change occurs, no control measures will be economically feasible. Some vegetation in Antelope Valley, Los Angeles County, under some stress due to dryness. Flats and slopes infested, favorable slopes have heavier concentrations. (Cal. Coop. Rpt.).

GREENBUG (Schizaphis graminum) - TEXAS - Light to moderate in small grains in Archer, Clay, Jones, Stonewall, Wichita, and Young Counties. Ranged trace to 70 per drill row foot. Moderate to heavy, 71-300 per drill row foot, in Baylor, Hardeman, Haskell, Knox, Throckmorton, and Wilbarger Counties. Parasitic wasps still active in some fields in Archer, Baylor, and Hardeman Counties. Up to 6 parasitized aphids per row foot noted. Light populations of lady beetles and spiders noted in Archer County fields. Lady beetles also noted in Haskell and Knox Counties. (Boring, Daniels). ARKANSAS - Survey negative in wheat and oats in White, Jackson, Craighead, Greene, Clay, and Lawrence Counties. (Boyer).

SMALL GRAINS

AN APHID (Rhopalosiphum padi) - TEXAS - Light in small grains in Archer, Baylor, Haskell, Knox, Throckmorton, and Wichita Counties. Ranged 1-10 per drill row foot. Moderate in Hardeman and Wilbarger Counties, ranged up to 150 per row foot. (Boring).

TURF, PASTURES, RANGELAND

FIRE ANTS (Solenopsis spp.) - TEXAS - Isolated infestations of S. xyloni (southern fire ant) noted on pastureland in Brazos County week ending January 31. During same period, increased S. geminata (fire ant) populations noted in Brazos and Burleson Counties. (Cole).

FORAGE LEGUMES

A LEAFMINER FLY (Liriomyza trifoliearum) - VIRGINIA - Three adults collected from alfalfa June 20, 1974, in Montgomery County by P. Larkins. Determined by G.C. Steyskal. This is a new State record. (Surles).

POTATOES, TOMATOES, PEPPERS

TOMATO PINWORM (Kieferia lycopersicella) - NEW MEXICO - Infestations continue in greenhouse tomato plants at Espanola, Rio Arriba County. Chemical treatments and parasitic wasps ineffective. (N.M. Coop. Rpt.).

GENERAL VEGETABLES

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Heavy in some commercial spinach fields in Uvalde area, Uvalde County, week ending January 31. Some growers treated. (Stewart).

GREEN PEACH APHID (Myzus persicae) - TEXAS - Some damage to spinach noted in fields in Zavala and Uvalde Counties week ending January 31. Infestation levels appear to increase at much higher rate in regrowth fields. (Stewart).

DECIDUOUS FRUITS AND NUTS

A FALSE POWDER POST BEETLE (Amphicerus cornutus) - NEW MEXICO - Adult feeding caused 5 percent stem damage to some pecan trees near Roswell, Chaves County, week ending January 31. This grove is near mesquite thicket. This is high percentage of damage. (N.M. Coop. Rpt.).

A WEEVIL (Otiorhynchus cribricollis) - NEW MEXICO - Collected from pecan at Carlsbad, Eddy County, June 5, 1974, by R. Marek. Collected from rose in Albuquerque, Bernalillo County, July 17, 1974, by J. Sais. Determinations by R.E. Warner. These are new county records. (PPQ).

ORNAMENTALS

A WEEVIL (Ochyromera ligustri) - VIRGINIA - Collected from shrubs at residence in Independent City of Richmond August 22, 1974, by J.R. Tate. Determined by R.E. Warner. This is a new county record. (PPQ).

FOREST AND SHADE TREES

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Survey conducted along 30-mile section of Blue Ridge Parkway from Mt. Pisgah, Haywood County, to Mt. Mitchell, Yancey County. About 5,000 trees killed, infestation concentrated in area between Oteen and junction of Parkway with U.S. Highway 25. Individual trees sampled showed average of 3-5 beetles per square foot of bark surface. Of 5,000 dead trees, 3,500 infested indicating high potential for spring and summer activity barring cold weather conditions. Beetle also attacked virgin spruce stand in Mt. Mitchell area. (USFS).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - SOUTH CAROLINA - Collected from pine in Anderson County by M. Smith February 4, 1975. Determined by D.K. Pollet. This is a new county record. (McCaskill).

LESSER PEACHTREE BORER (Synanthedon pictipes) - ALABAMA - Larvae of this species and Sanninoidea exitiosa (peachtree borer) extremely active in 10 large cherry laurel trees along streets and buildings in Lee County. Synanthedon pictipes predominant species, ranged 25-100 per tree on larger trees. Two specimen trees about dead and others badly injured. (McQueen).

MAN AND ANIMALS

COMMON CATTLE GRUB (Hypoderma lineatum) - KENTUCKY - Larvae averaged 1.60 per animal on backs of 25 Holstein dairy cows of various ages in Fayette County. (Barnett). TEXAS - Infestations still light on backs of cattle in Davis Mountain areas of Brewster and Jeff Davis Counties. (Neeb).

CATTLE BITING LOUSE (Bovicola bovis) - TEXAS - Moderate to heavy on cattle in Pecos, Brewster, and Jeff Davis Counties. (Neeb).

EAR TICK (Otobius megnini) - TEXAS - Moderate to heavy on livestock in Brewster, Jeff Davis, Ward, and Winkler Counties. (Neeb).

HOUSEHOLDS AND STRUCTURES

A DRYWOOD TERMITE (Kalotermes approximatus) - GEORGIA - Specimens collected from windowsill of sunporch of residence at Fort Gaines, Clay County, September 12, 1974, by J.W. Dobbins. Determined by D.R. Smith. This is a new State record. (PPQ).

BENEFICIAL INSECTS

AN ENCYRTID WASP (Timberlakia europaea) - FLORIDA - Specimens collected from Antonina graminis (Rhodesgrass scale) at Gainesville, Alachua County, November 22, 1974, (emerged December 2, 1974) by R.I. Sailer. Determined by G. Gordh. This is a new State record. (Grissell). This is the first record of this species being found since specimens from France were released in Texas in the 1950's. (PPQ).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

ORIENTAL FRUIT FLY (Dacus dorsalis) - CALIFORNIA - The anticipated two months of female fly annihilation treatment, after last fly find, scheduled for February 1, if no additional larvae or mature females found. One additional penult treatment planned for last 14 days of February in 4-square-mile section of core area in San Diego County. Additional McPhail traps being deployed although all trapping negative for several weeks. (Cal. Coop. Rpt.).

WOOLLY WHITEFLY (Aleurothrixus floccosus) - CALIFORNIA - Very light infestations found on about 20 properties at Santa Ana, Orange County, week ending January 31. New infestation noted at Encinitas, San Diego County. This location between San Diego and Carlsbad areas where infestations are established. (Cal. Coop. Rpt.).

A New Leafhopper in California

Ten adults and 3 nymphs of *Scaphytopius nitridus* (DeLong) were collected from citrus (grapefruit) near Riverside, Riverside County, March 9, 1970, by G.H. Kaloostian and H.D. Pierce. Determined by J.P. Kramer. This is a new United States record. *S. nitridus* has also been collected from citrus near Temecula November 3, 1970, and near Indio November 19, 1970, by H.D. Pierce. This leafhopper has been reported from all areas of Mexico since 1924 and has probably been in southern California for a long time. Heavy parasitism of *S. nitridus* by *Tomasvaryella appendipes* (Cresson) (Diptera: Pipunculidae) apparently keeps the leafhopper population below noticeable levels. *T. appendipes* was not known to parasitize *S. nitridus* prior to 1971, but was known to parasitize other Cicadellidae and to be widely distributed in the Southeastern, South Central, and Southwestern United States.

The nymphs collected at Riverside were the first evidence that *S. nitridus* might reproduce on citrus. In subsequent trials by Kaloostian and Pierce, adult females oviposited many eggs under the leaf tissue of citrus seedlings. After an incubation period of about 8 days, nymphs began to emerge. These nymphs molted 5 times. The life cycle from egg to adult required about 50 days.

S. nitridus was shown to be a vector of the causative agent of citrus stubborn disease (*Spiroplasma citri*) from diseased trees to periwinkle (*Vinca rosea*) and to citrus in 1974 by G.H. Kaloostian et al. Stubborn disease of citrus is caused by a mycoplasmalike organism similar to greening disease in Africa and India and leaf mottling in the Philippines. These diseases are transmitted by psyllids, *Diaphorina citri* Kuwayana (citrus psylla) and *Trioza erytreae* (Del Guercio). Neither disease is known to occur in the United States. (Kaloostian et al.).

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
25(7):66, 1975

DETECTION

New United States Record - A LEAFHOPPER (*Scaphytopius nitridus*) - CALIFORNIA - Riverside County. (p. 66).

New State Records - A DRYWOOD TERMITE (*Kalotermes approximatus*) - GEORGIA - Clay County. (p. 65). AN ENCYRTID WASP (*Timberlakia europaea*) - FLORIDA - Alachua County. (p. 65). A LEAFMINER FLY (*Liriomyza trifoliearum*) - VIRGINIA - Montgomery County. (p. 63).

New County Records - PINE NEEDLE SCALE (*Phenacaspis pinifoliae*) SOUTH CAROLINA - Anderson (p. 64). A WEEVIL (*Ochyromera ligustri*) VIRGINIA - Richmond (p. 64). A WEEVIL (*Otiorhynchus cribicollis*) NEW MEXICO - Eddy (p. 64).

CORRECTIONS

CEIR 25(1-5):HIGHLIGHTS - Change in Scientific Name X. crassiusulus should read X. crassiusculus.

CEIR 25(1-5):12 - New State Records - A CERAMBYCID BEETLE (Callimoxys sanguinicollis sanguimicollis) should read (Callimoxys sanguinicollis sanguinicollis).

The arctic cold front created a band of snow that stretched from the Texas Panhandle through the Ohio Valley into New York and Pennsylvania on Saturday. The heaviest snowfall occurred in Illinois where 2 inches blanketed both Springfield and Peoria. Sunday, snow fell around a Low in Pennsylvania and southward from the Lakes through Indiana, Kentucky, Tennessee, and all along the storm front to the Texas coast. In the West a new frontal system, reaching inland from the Pacific, triggered rain and some freezing rain along the north Pacific coast and southern California coastal areas. Four inches of new snow blanketed Spokane and Colville, Washington, while 1 inch of rain soaked Santa Barbara, California.

TEMPERATURE: Bitter cold temperatures plagued most of the Nation last week. For the second consecutive week, Montana remained the Nation's coldest spot. Butte, Montana, averaged 29 degrees lower than expected. Monday, sharply contrasting afternoon temperatures prevailed across the country with extremes ranging from a frigid 11 degrees below zero at Cut Bank, Montana, to 83 degrees at Fort Myers, Florida. Subzero temperatures were reported across the northwestern Plains on Tuesday morning. During the day, unseasonably cold air swept southward into the Plains and upper Mississippi Valley. Wednesday, very cold air plunged further southward through the Plains behind a storm system centered in the Nations midsection. Early afternoon temperatures remained below zero in portions of the northern Plains and northern Rockies. Thursday, frigid arctic air creeped southward into the heart of the Nation dropping early morning temperatures to below zero as far south as southern Nebraska, and Colorado, Montana, and Wyoming lay under the coldest air with 25 degrees below reported at Butte, Montana, and 15 degrees below at Worland, Wyoming. Arctic air blanketed the central United States forcing temperatures well below normal Friday. Freezing temperatures reached southward to the gulf coasts of southeast Texas and southern Louisiana. Cold air dropped temperatures below zero over much of the upper Mississippi Valley. Dubuque, Iowa, recorded the coldest reading for the Nation on Friday with 14 degrees below zero. Saturday morning, a pool of bitter cold, below-zero arctic air covered the area from the northern Rockies to the western Great Lakes. Montana, North Dakota, and Minnesota reported numerous readings colder than 15 degrees below zero. Both International Falls and Brainard, Minnesota, claimed the coldest readings with a frigid 26 degrees below. Clear skies and arctic air combined to drop temperatures ten to twenty degrees below zero from the northwestern Rockies to the central Great Lakes. As far south as Lincoln, Nebraska, early Sunday morning readings fell to 22 degrees below zero. Sault Sainte Marie, Michigan, reported the coldest reading with 32 degrees below zero.

Status of the European Corn Borer in 1974 [1]

Introduction: Surveys to determine the abundance of European corn borer (*Ostrinia nubilalis* (Hübner)) in the fall of 1974 were conducted by cooperating agencies in 16 States. All survey data, summaries, and records of field observations were processed by the Pest Survey and Technical Support Staff in Hyattsville, Maryland.

The 1974 European corn borer survey was conducted during late summer and early fall. The survey is designed to measure the fall populations of European corn borer larvae and is conducted during a favorable time to include a high percentage of late instars, wherever possible. Except for some minor differences in compiling data, the accepted survey methods were followed in all cases. The survey was conducted on a district basis wherever possible in 1974. A district is usually a group of counties within a State, in most cases based on Crop Reporting Districts.

New Distribution: European corn borer was reported for the first time in four counties in Tennessee, one county in Nebraska, and one county in Kansas. There was no new distribution reported in any of the other States where this pest is known to occur. European corn borer larvae were recovered from sorghum in Jackson County, Florida, the first time this species had been found on a crop in that State.

Abundance: European corn borer fall populations showed decreases in 10 of the 12 North Central States reporting in the survey. Decreases were also noted in Delaware and Kentucky. Some increase in populations was noted in Kansas and Nebraska.

The fall European corn borer survey in Illinois indicated that the statewide second-generation population was among the lowest ever recorded for that State. The State average of 36 borers per 100 cornstalks compares to 126 borers in 1973 and a 10-year average of 105 per 100 stalks. Infestation was lightest in northern Illinois and heaviest in the southern part of the State where only two counties had average populations of more than 100 borers per 100 stalks--Madison 152 and Gallatin 195.

In Iowa, the 1974 fall European corn borer populations were greatly reduced from those of 1973. Statewide, only 21 percent of the corn plants were infested with an average of 23 borers per 100 stalks, one of the lightest overwintering populations ever recorded in the State. The heaviest count was observed in the southeast (District XII), the same as in 1973, where 39 percent of the plants were infested with an average of 51 borers per 100 plants. The potential for serious first-generation European corn borer problems in Iowa in 1975 is very low. Results of the European corn borer fall survey for 1974 in Kansas showed the average percent stalks infested and average number of borers per 100 stalks somewhat below those of 1973 in the northeast and east-central districts, and somewhat higher than 1973 in all other districts, especially in the southwest district. Fall populations in Nebraska increased sharply in the northeast district and decreased sharply in the southeast district. Slight increases were noted in the east, south, and central districts of Nebraska.

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[1] Survey data provided by State agricultural agencies. Data compiled and summarized by Pest Survey and Technical Support Staff, Plant Protection and Quarantine Programs, Animal and Plant Health Inspection Service, United States Department of Agriculture.

European corn borer populations decreased in all Minnesota districts in 1974 to the lowest level in the history of the surveys in that State. The State average count for Wisconsin was the lowest count in more than 30 years. Populations in corn for grain were generally heavier in the northern counties, presumably the result of relatively early corn planting in those counties as compared to the southern counties which were too wet to plant early in May. The average infestation level in Michigan showed a slight decrease in 1974 from that found in 1973.

In Delaware, the State average of 321 borers per 100 plants in 1974 was a decrease of about 21 percent compared to the 1973 average of 407 borers per 100 stalks. While still very high, the 1974 European corn borer populations in other crops, such as sweet peppers, potatoes, and green beans, were also somewhat lighter than in 1973. The 1974 European corn borer fall survey was not conducted in Maryland. The survey has been changed to a two-year schedule in that State.

Table 1. Summary by States of European Corn Borer Abundance in Corn, Fall of 1974, Compared with Data for 1973

	1973			1974			Comparable Districts or Counties Surveyed Both Years		
States	No. of Districts Surveyed	Average No. of Borers Per 100 Plants	No. of Counties Surveyed	No of Districts Surveyed	Average No. of Borers Per 100 Plants	No. of Counties Surveyed	Number	Borers Per 100 Plants 1973	1974
Eastern									
Delaware	1	407	3	1	321	3	1	407	321
Maryland 1/	3	161	12	-	-	-	-	-	-
Total	4		15	1		3			
Average 2/								407	321
North Central									
Illinois	9	125	46	9	35	43	9	125	35
Indiana	12	109	92	12	27	92	12	109	27
Iowa	12	85	99	12	23	99	12	85	23
Kansas	9	30	50	9	35	50	9	30	35
Michigan	5	113	20	5	98	20	5	113	98
Minnesota	7	41	34	7	11	34	7	41	11
Missouri	8	167	43	8	108	39	8	167	108
Nebraska	5	53	25	5	78	25	5	53	78
North Dakota	1	50	5	1	15	5	1	50	15
Ohio	5	136	33	5	33	33	5	136	33
South Dakota	6	85	33	5	65	32	5	85	32
Wisconsin	9	76	54	9	54	11	9	76	11
Total	88		534	88		483			
Average 2/								89	42
Southern									
Kentucky	1	40	25	1	14	13	1	40	14
North Carolina 3/	-	-	-	4	32	69	-	-	32
Total				5		82			
Average 2/									9

1/ No survey conducted in 1974; has been changed to a 2-year schedule.
2/ Weighted averages based on districts surveyed.
3/ Not included in previous fall surveys.

Table 2 - European Corn Borer Abundance in Corn
Fall of 1974, Compared with Data for 1973

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1973	1974
Delaware (Agr. Expt. Sta.)		
New Castle	233	124
Kent	325	346
Sussex	663	492
Average	407	321
Illinois (Natural History Survey, Ext. Ser.)		
Northwest	121	17
Northeast	98	9
West	246	28
Central	71	25
East	71	22
West-southwest	138	64
East-southeast	105	36
Southwest	144	54
Southeast	132	109
Average	125 1/	35 1/
Indiana (Ext. Ser., Expt. Sta.)		
North-northwest	134	22
North-northcentral	188	23
North-northeast	194	33
Northwest	62	29
North Central	140	11
Northeast	109	8
Southwest	94	25
South Central	47	9
Southeast	48	4
South-southwest	139	87
South-southcentral	70	28
South-southeast	83	12
Average	109	27

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1973	1974
Iowa (State Dept. Agr.; Ext. Ser.; Ent. Dept. Iowa State Univ,; PESS, ARS, USDA)		
District I	25	18
District II	24	4
District III	81	2
District IV	72	47
District V	57	5
District VI	86	3
District VII	129	39
District VIII	50	11
District IX	67	21
District X	100	46
District XI	143	26
District XII	182	51
Average	85	23
Kansas (Ins. Sur.)		
Northeast	104	92
North Central	19	24
East Central	117	85
Central	7	15
Southeast	17	63
South Central	1	13
Northwest	2	4
West Central	2	6
Southwest	Trace	9
Average	30	35
Kentucky (Ins. Sur.).		
Surveyed counties	40	14
Maryland (Agr. Ext. Ser.; Ins. Sur.)		
Eastern Shore	224	
Southern area	151	
Central and Western area	134	
Average	161 2/	3/

1/ Average based on comparable counties surveyed in 1973 and 1974, rather than districts.

2/ Average based on county averages rather than district averages.

3/ No survey conducted in 1974; has been changed to a 2-year schedule.

Table 2 (Continued)

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1973	1974
Michigan (Ins. Sur.)		
District 1	126	95
District 2	112	86
District 3	129	108
District 4	98	87
District 5	100	80
Average	113 4/	98 4/
Minnesota (State Dept. Agr.)		
Southwest	21	13
South Central	25	1
Southeast	46	2
West Central	62	22
Central	44	10
East Central	61	8
Northwest	31	22
Average	41	11
Missouri (Ext. Ser., Ins. Sur.)		
District I	174	100
District II	105	97
District III	414	127
District IV	108	88
District V	131	88
District VI	172	146
District VII	65	51
District IX	165	170
Average	167	108
Nebraska (Agr. Expt. Sta.; Ext. Ser., Ins. Sur.)		
Northeast	32	166
East	57	82
Southeast	89	46
Central	42	51
South	43	47
Average	53	78

4/ Averages based on field averages rather than district averages.

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1973	1974
North Carolina (Ins. Sur.)		
Tidewater area	5/	41
Coastal Plain area		35
Piedmont area		21
Mountain area		36
Average		32 6/
North Dakota (State Dept. Agr.)		
Southeast	50	15
Ohio (Ext. Ser.; ARS, USDA)		
Northwestern	180	37
West Central	110	33
Central	121	24
Southwestern	108	36
Northeastern	77	17
Average	119	29
	136 6/	33 6/
South Dakota (Agr. Expt. Sta., Ext. Ser.)		
North Central	98	29
Northeast	36	38
Central	151	38
East Central	127	92
Southeast	82	127
South Central	17	-
Average	85 7/	65 7/

5/ North Carolina not included in previous surveys.

6/ Averages based on counties surveyed.

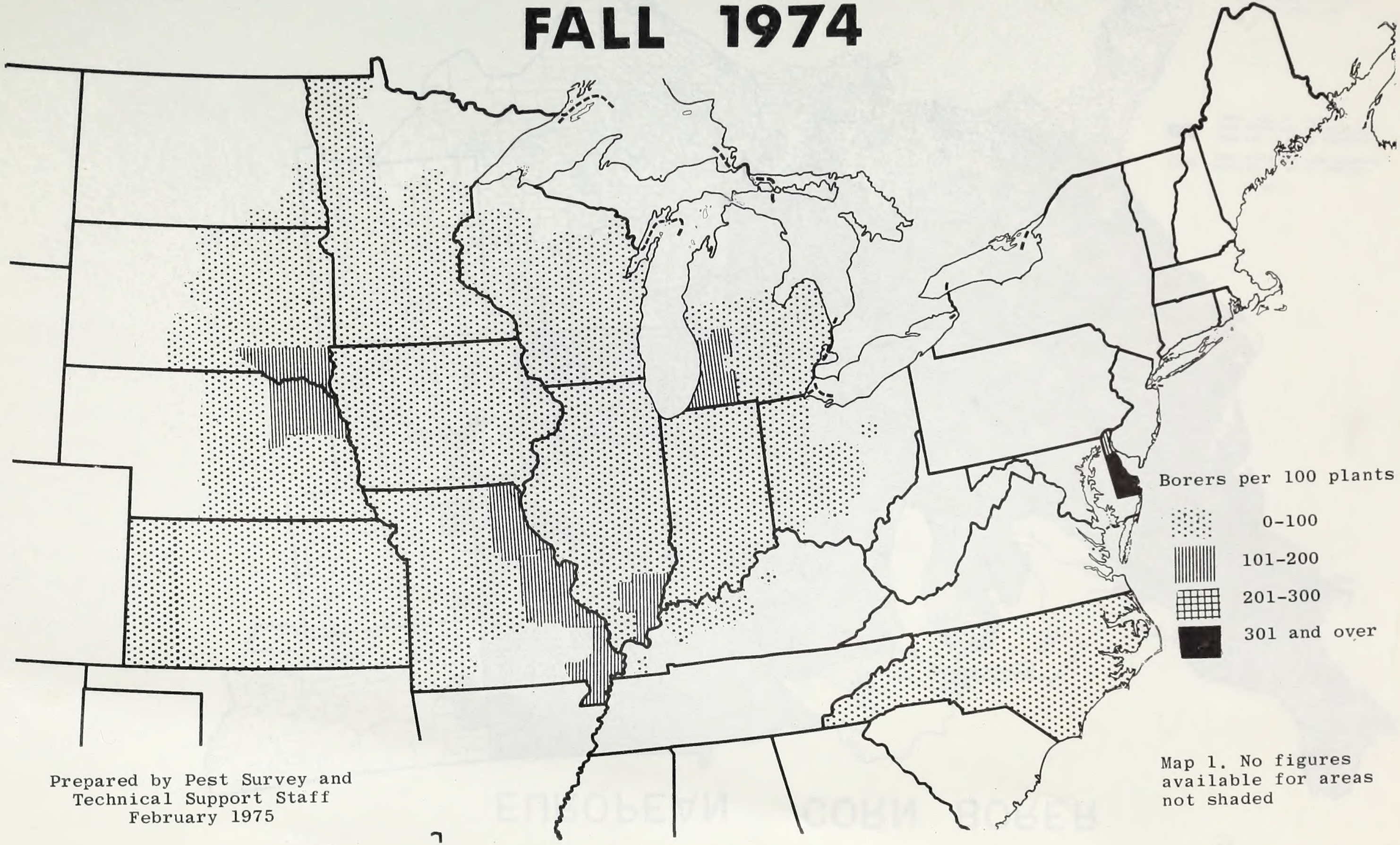
7/ Averages based on 6 districts in 1973 and 5 districts in 1974.

Table 2 (Continued)

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1973	1974
Wisconsin (State Dept. Agr.)		
Northwest	72	26
North Central	14	100
West Central	100	25
Central	85	8
Southwest	133	11
South Central	71	2
Southeast	78	2
East Central	40	10
Northeast	25	19
Average	76 8/	11 8/

8/ Based on field averages rather than district averages.

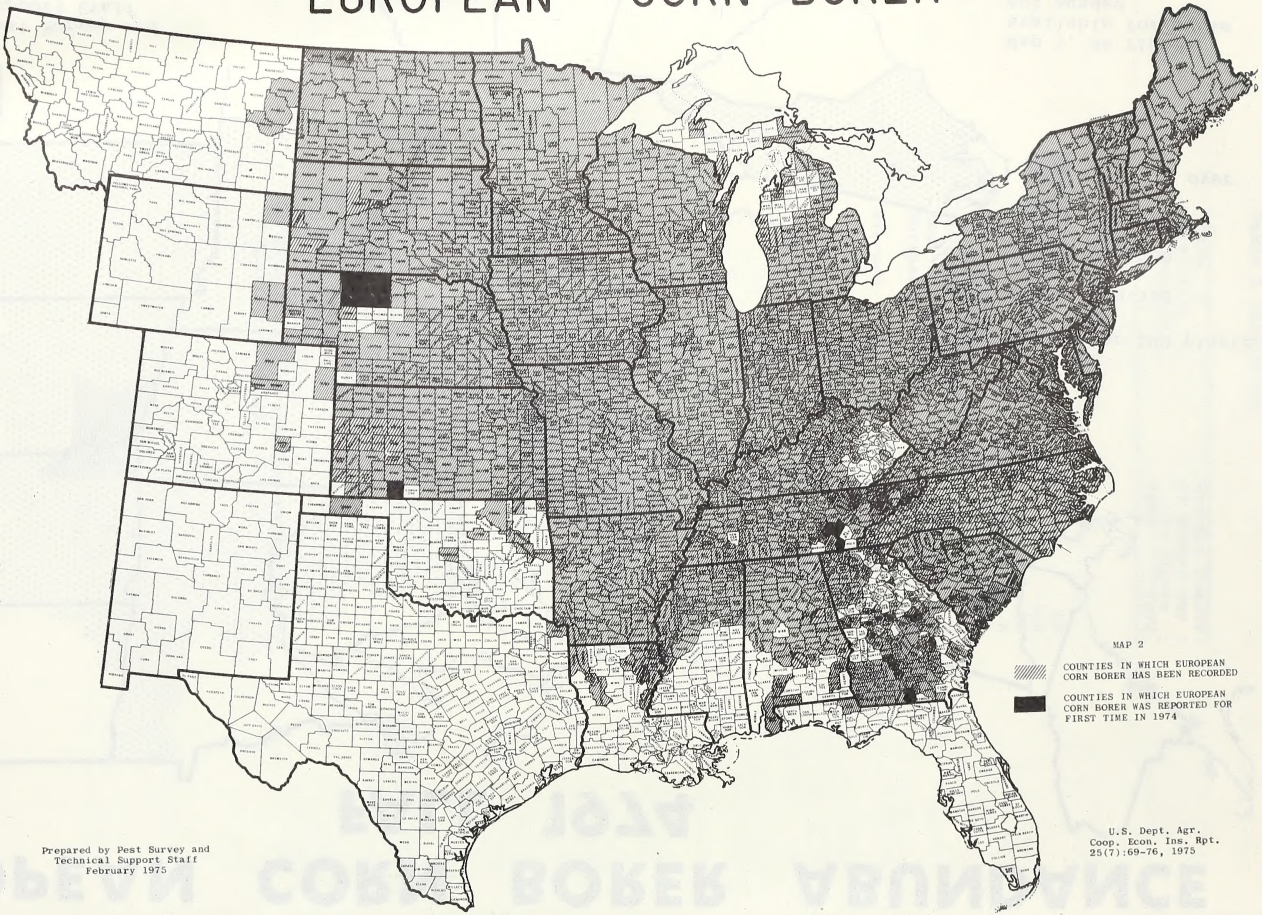
EUROPEAN CORN BORER ABUNDANCE
FALL 1974



Map 1. No figures available for areas not shaded

Prepared by Pest Survey and
Technical Support Staff
February 1975

EUROPEAN CORN BORER


MAP 2
COUNTIES IN WHICH EUROPEAN CORN BORER HAS BEEN RECORDED
COUNTIES IN WHICH EUROPEAN CORN BORER WAS REPORTED FOR FIRST TIME IN 1974

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
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U.S. DEPARTMENT OF AGRICULTURE
HYATTSVILLE, MARYLAND 20782

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